

# UNITED STATES PATENT OFFICE

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## EDUCATIONAL DEVICE

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The present invention relates to educational devices, and more particularly to an automatic, self-operated machine to facilitate self-education and to give an indication of proficiency by self-operated scoring means.

The principal object of the invention resides in the provision of a device for automatically displaying an illustration or visual representation and a plurality of phrases relating to the illustration including correct and incorrect designations pertaining to the illustration or visual representation, together with a multiple choice selecting mechanism and scoring means for automatically indicating whether the correct designation is chosen.

A further object of the invention resides in the provision of a device as described above, together with means for displaying the correct designation associated with each illustration at a time after the multiple-choice designation has been selected by the student, in order that the student will be informed of the correct designation even though he may make an erroneous designation selection.

A further object of the invention resides in the provision of a unique multiple-choice scoring system comprising a scoring area or portion on a transparent film frame for registering a score together with a photoelectric means and shutters to indicate the correct or incorrect choice of multiple-choice designations.

Another object of the invention resides in the provision of a device as described above wherein the pictures displayed are projected onto a back-lighted screen in order to provide an illustration and phrases relating to the illustration sufficiently large to be easily examined and clearly visible to at least several persons simultaneously.

Further objects will be apparent hereinafter.

Before describing the detail of the structure illustrated in the drawing and chosen as best illustrative of the principles of the invention, it is believed pertinent to point out that the inventor recognizes the existence of certain devices arranged to display an illustration together with multiple-choice answers, and to indicate the correct choice of an answer. So far as is known, however, all of such prior devices have been highly objectionable in certain features and it is submitted that the present invention, by overcoming the objections to the prior art structures, makes a substantial and valuable contribution to the art.

In considering the various characteristics of the present disclosure it should be kept in mind

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that machines of this character may be used in the training of military personnel in technical matters. When so used, it is important to provide as high a degree of amusement and maintain as high a degree of competitive spirit as possible. In this connection, it may be pointed out that in all naval training stations the educational schedule is very intensive, and that self-operated devices having no factor of amusement are of little value. It has been discovered, however, that machines of the character here disclosed provide a sufficient degree of amusement so that even after personnel have spent a full day in formal class room or field study, they will find sufficient amusement in the operation of the machine to utilize their spare time in recreation rooms and barracks in manipulation of the device and in competitive efforts to obtain a good score.

Further, in a device designed for use in crowded quarters, as, for example, in enlisted men's barracks, it is desirable that the teaching capacity of the device shall not be limited to one person, but shall include several or many. One of the most serious deficiencies of prior devices of this character is that they ordinarily display a relatively small illustration, placed deep below a small window or lens, so that it is difficult to observe and so that it may be seen only by one person at a time. Obviously, such an arrangement does not foster the development of a competitive spirit between members of a group.

In contrast to this, the present device projects a sufficiently large illustration on a screen so that it may be viewed by many persons at any reasonable angle, and within any reasonable distance from the screen; so that as one person operates the mechanism and makes his choice of the designations or phrases in relation to the illustration, others may observe what is being done and observe the correctness or inaccuracy of the designations as they are given. With this arrangement, a greater incentive for competition is presented and, since the phrases pertaining to the illustrations are in sufficiently large print so that they may be easily read, the continued operation of the device is not tiring to the student.

In general, the invention contemplates the provision of an automatic machine having an external screen of relatively large dimensions so positioned that it may be viewed by a number of persons simultaneously. In addition to the screen, the cabinet of the machine will be provided with a plurality of designation selecting buttons and a scoring dial so that as each illustration is presented, the student may make a